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November 26, 2002

Ms. Gwendolyn Massenburg  
Project Manager Superfund Division  
U.S. Environmental Protection Agency  
77 West Jackson Boulevard, SR-6J  
Chicago, Illinois 60604

***VIA ELECTRONIC AND REGULAR MAIL***

**Subject:** Contract No. 68-W6-0042; Work Assignment No. 144-RSBD-0521  
Chemical Recovery Systems – Task 1.1.6 Review of PRP Documents  
Review Comments Regarding the following Documents:

- 1) EPA Administrative Order on Consent (AOC) for Remedial Investigation/Feasibility Study in the Matter of Chemical Recovery Systems, Inc. (CERCLIS ID# OHD 057 001 810)
- 2) Remedial Investigation/Feasibility Study (RI/FS) Work Plan, Chemical Recovery Systems, Inc., Elyria, Ohio, prepared by Parsons, August 2002
- 3) Remedial Investigation/Feasibility Study (RI/FS) Field Sampling Plan, Chemical Recovery Systems, Inc., Elyria, Ohio, prepared by Parsons, August 2002.

Dear Ms. Massenburg:

At your request, Metcalf & Eddy, Inc. (M&E) has performed a review of the USEPA AOC and the Respondent's RI/FS Work Plan documents (items 2 and 3 referenced above) and is providing the attached General Comments for your consideration. As we discussed, USEPA Region 5 will perform the review of the Respondent's Quality Assurance Project Plan, and therefore, M&E will not be providing comments on the QAPP document.

Two copies of our technical comments are attached and electronic files have been sent to you via e-mail. This review was conducted as part of Task 1.1.6 at a high level of effort. Reviewers included the project chemist (C. Lapite and A. Schkuta), project geologist (M. Jones), and me, the project manager. An overall quality assurance check was made by the RAC Deputy Program Manager (C. Haggard).

Ms. Gwendolyn Massenburg  
USEPA  
November 26, 2002

We appreciate the opportunity to review and comment on these documents. If you should have questions or would like to discuss the attached comments, please call me at (614) 890-5501.

Sincerely,

METCALF & EDDY, INC.

A handwritten signature in black ink that reads "Barry R. Nelson". The signature is written in a cursive, flowing style.

Barry R. Nelson, C.P.G.  
M&E Work Assignment Manager

BRN:llp

Attachment: M&E Review Comments (9 pages)

cc: Diana King, EPA Region I Project Officer (letter only)  
C. Lapite M&E  
M&E File: 036200100.0044.0000

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**REVIEW COMMENTS ON THE PRP DRAFT RI/FS WORK PLAN  
FOR THE CHEMICAL RECOVERY SITE, ELYRIA, OHIO**

**General Comments**

1. Table of Contents has several incorrect page numbers and typographical errors. Please review this text and correct as needed.
2. Figure 1-2 (site plan) appears to inaccurately portray the eastern riverbank. The diagram shows part of the former above ground storage tank area as being in the East Branch of the Black River. If the site diagram of E&E is correct, the riverbank on Figure 1-2 should be approximately 25 feet further west at the northern and southern portions of the site. Please adjust Figure 1-2.
3. The Site Plan (Figure 1-2) indicates that MW-1, MW-2, and MW-3 have been destroyed. MW-1 and MW-2 were located and sampled during Ohio EPA's STEP investigation of 1996. Have the destroyed wells been located in the field and if so, what is their current condition? Figure 2-4 does not provide the "destroyed monitoring well" symbol in the legend.
4. A Generalized Stratigraphic Column would be a helpful addition to the text (Section 3) to provide a visual representation of the geology beneath the vicinity of the site.
5. The Administrative Order of Consent (AOC), Section V, Findings of Fact, Item 9, describes the Site as "*approximately four (4) acres (with several lots within the 4 acres)*". The figures in the work plan documents have maximum dimensions of 425' x 300' (this assumes the northern property line extends from Locust Street to the *opposite* river bank on the diagram as drawn and that the western property line runs due west, although the southern property line is actually less than 300') for a maximum total area of 127,500 ft<sup>2</sup> or approximately 3 acres. The Work Plan does state in Section 1.4 that the

Site is “*approximately 2.5 acres in size*”. Review of previous site diagrams does not resolve this issue.

Estimates of total site size using figures and provided scales from E&E’s report have the site size ranging from 2.2 to 3.3 acres. Ohio EPA’s STEP Report’s (Figures 2 and 3) has an estimated area of 9-10 acres. PRC’s 1995 Focused Site Inspection Prioritization Site Evaluation Report figure 2 (which says modified from E&E 1982) gives a calculated size area of approximately 19 acres. Evidently the scale on the different historical figures has been altered by copying or by another means, but there is no agreement on the site size. Please note the discrepancies in the past site figures and provide a consistent description of the area of the site.

6. PCBs are not scheduled to be measured for the majority of soil boring samples. Given the extensive regrading of the site, the expected relative immobile migration of PCBs, and the previous detection of PCBs in groundwater at the site (including both monitoring well MW-2 located in the southern portion of the site and MW-1 located in the northern portion of the site) it is recommended that all samples be analyzed for PCBs.
7. A damaged storm sewer that runs under the site may have allowed contaminant migration (PRC, 1995). No borings or groundwater samples have been indicated in the area of this storm sewer to assess if contaminants have migrated along this pathway. It is recommended that additional borings be located near this storm sewer adjacent to areas of concern (such as former drum storage areas and the area of the former Brighten Still building).
8. Reportedly, groundwater flows west under the site towards the East Branch of the Black River (E&E, 1982). No down gradient groundwater samples are indicated for potential source areas identified as former drum storage areas 1, 4 and 5, the former above-ground storage area, or former tanker staging area 2 (see Figure 4-1). Please provide the rationale for the lack of groundwater sampling at these locations.

### **Specific Comments**

1. Section 1.4, pages 1 and 2 of 43: The sentence appears cut off at the bottom of page 1 and does not continue to page 2. Please provide the missing text.
2. Section 2.3.4, page 5 of 43: there is a bulleted list of eight potential AOCs whereas Section 4.2.1.4, page 23 of 43 (last two lines of the page) identifies five categories of AOCs. Section 4.2.1.4 does not include groundwater, the riverbank, or the AST farm. Please explain the discrepancy in the two lists.
3. Figure 2-4: the scale presented is one inch equals 20 feet, however, the same base drawing used in Figure 1-2 (Site Plan) is one inch equals 40 feet. Based on the aerial

photographs and other drawings it appears that the Figure 2-4 scale is incorrect. Please review the scales on the figures and correct as necessary.

4. Section 3.0, Table 3-1, page 1 of 1 and Section 2.3.4, page 5 of 43: These sections state that there are 5 drum storage Areas of Concern (AOCs), but Figure 1-2 identifies only four by name. The figure shows two former storage areas at the north end of the site, one rectangular and one semi-circular area. Please clarify the text and figures to show a consistent number of former drum storage areas.
5. Table 3-1, page 1 of 1: a large data gap relative to the slope from the Site down to the River is identified in this table. It further mentions the historical evidence for discharges down this slope and states that no data exists for determining the presence and magnitude of impacted surface soil along the slope. Section 3.4.1 states that the goal of the RI/FS is to address the data gaps identified in Table 3-1, but nothing in the work plan appears to address the lack of data on the slope. Table 4-1 (Sampling Program Rationale) and Figure 4-1 (Proposed Sampling Locations) do not show that any samples will be taken in the slope soils. Please address this data gap.
6. Section 4.0, Table 4-1, pages 5 and 6 of 7: Figure 7 is mentioned in the table, but there is not a Figure 7 in the work plan. Please address this discrepancy.
7. Section 4.0, Table 4-1, page 7 of 7: Seven monitoring wells are proposed in this table and a footnote proposes two soil samples per monitoring well. The table identifies 7 proposed samples rather than 14. Please clarify the number of soil samples to be collected from the monitoring well locations.
8. Section 4.2.1.1, page 22 of 43: The AOC (Section VIII Work to Be Performed, Item 66) *“Respondents will not proceed further with any subsequent activities or tasks until receiving U.S. EPA approval for the following deliverables: RI/FS workplan and sampling and analysis plan...”*. Mobilization activities should also include a specified notice period to U.S. EPA.
9. Section 5.3.2, page 40 of 43: The text states that the FS report will follow the goals in Section 4.5, but it appears that Section 4.4 should have been referenced as well.
10. Section 6.0: Based on the timeline for the QAPP submittal and review, the schedule will require modification to reflect the actual progress of the work.

# REVIEW COMMENTS ON THE PRP FINAL RI/FS FIELD SAMPLING PLAN FOR THE CHEMICAL RECOVERY SITE, ELYRIA, OHIO

## General Comments

1. Table of Contents (TOC) has several incorrect page numbers and some of the titles for tables and figures are different than the TOC headings. Please review this text and correct as needed.
2. The Administrative Order of Consent (AOC) and Statement of Work (SOW) specifies in Task 3, Section a.iii that each source of contamination must be located. It also specifies *“the areal extent and depth of contamination will be determined by sampling at incremental depths on a sampling grid”*. In FSP section 2.1, 4<sup>th</sup> and 5<sup>th</sup> paragraph, the Respondents proposes to perform judgmental sampling of known areas of impact. The FSP proposes a total of 12 laterally different boring locations. Ten potential source areas have been defined;
  - Tanker Staging Area #1
  - Tanker Staging Area #2
  - Above Ground Storage Tank Area
  - Brighton Still Building Area
  - Rodney Hunt Still Building Area
  - Drum Storage Area #1
  - Drum Storage Area #2
  - Drum Storage Area #3
  - Drum Storage Area #4
  - Drum Storage Area #5 (although not shown in the figures).

This equals a single sample for characterizing the majority of each of the areas of concern. Twelve samples would be equivalent to sampling the centers of a 100-foot by 100-foot grid overlaid on the site. Based on historical data from previous investigations, these selected locations would be expected to indicate contamination, but it is unclear how the results would be used to assess the lateral extent of contamination and how uncontaminated areas (either up gradient, down gradient or cross gradient) would be identified. It is recommended that two locations be selected in each area of concern, along with an up gradient and down gradient location to assess lateral extent of contamination.

3. PCBs are not scheduled to be measured for the majority of soil boring samples. Given the extensive regrading of the site, the expected relative immobile migration of PCBs, and the previous detection of PCBs in groundwater at the site (including both monitoring well MW-2 located in the southern portion of the site and MW-1 located in the northern portion of the site) it is recommended that all samples be analyzed for PCBs.
4. The FSP does not provide specific analytical methods for each media to be analyzed nor

does it refer to the QAPP document. Please amend the tables and text in the FSP to show the specific analysis being performed in each AOC.

### **Specific Comments**

1. Section 1.3, page 2 of 15, third paragraph: Section IV, Item 6 of the AOC states “*in entering into this Consent Order, the objectives of U.S EPA and the Respondents are: (a) to determine the nature and extent of contamination and any threat to the public health, welfare, or the environment caused by the release of hazardous substances, pollutants or contaminants at or from the Site or facility, by conducting a remedial investigation;*” The objectives in Section 1.3 to “evaluate” and “provide information” do not meet the requirements of the AOC.
2. Table 1.2: Five drum storage areas are identified in this table, but Section 2.2 (page 4 of 15) identifies four drum storage areas. Figure 1-2 labels four of the drum storage areas and appears to show the outline of a fifth area. Please clarify the table, text and figures to show a consistent number of drum storage areas.
3. Table 1.1: The slope from the Site to the River is identified as a data gap, but it is not included in Table 1.2 Site Activities List. PRC (1995) describes that in 1978 up to six leachate seeps were observed flowing in the East Branch of the Black River. A leachate sample analyzed in 1980 contained PCBs. It is recommended that samples near or from the riverbank be collected during this investigation.
4. Section 2.1, page 3 of 15: The slope from the Site to the River should be included as the sixth AOC at the end of the second paragraph due to the seeps noted in the 1995 PRC report and the fact that it is a data gap in Table 1.1 (see comment above).
5. Section 2.3 and Figure 2-1: Two former tanker staging areas have been identified on the southern portion of the site. These areas are consistent with the aerial photograph from 1978 (Work Plan figure 2-3). Work Plan figure 2-2, an aerial photograph from 1966, is annotated with indicators of tanker storage areas that extend former tanker staging area 1 northerly, and former tanker staging area 2 easterly. No sample locations have been proposed in these extended areas that appear to have been historically used for tanker storage. It is recommended that soil samples be collected from this area.
6. Section 2.4, page 5 of 15: Paragraph 1, sentence 6 states “*Past soil borings collected near the Brighton Still building indicate no soil impact*”. Table 2.3, 1<sup>st</sup> row, ‘Previous Assessments’ column states “*Sample collected at up-slope portion of facility (EASN/MEAGH4) indicated no soil impact*”.

Soil sample EASN/MEAGH4 (STEP, 1997) collected 8/14/96 at a depth interval of 5-6' and identified as “Brighton Still” had chlorinated VOCs (e.g. PCE at 290 ppb), BTEX (e.g. xylenes at 89 ppb), phthalates (e.g. butylbenzylphthalate at 8,000 ppb), and PCBs

(e.g. Aroclor-1232 at 1,100 ppb). Boring B-7 (E&E, 1982) was also taken in this general area and indicated the presence of chlorinated volatiles (e.g. TCE at 58,000 ppb at 15-16.5'), BTEX (e.g. Toluene at 530,000 ppb at 15-16.5') and PCBs (e.g. Aroclor 1254 at 7,600 ppb at 2.4-4') from surface to 16.5' bgs. This indicates that impacted soil has been seen in the area of the site. In addition monitoring well MW-1, sampled in both previous studies, is in the area of the former Brighten Still Building and high levels of contaminants were found in this monitoring well (e.g. toluene at 100,000 ppb, TCE at 6,300 ppb) in both previous major studies. The text should reflect the past findings as noted above and remove the statements regarding no impact.

7. Table 2.3, 2<sup>nd</sup> row, 'Previous Assessments' column: The Rodney Hunt Still Building explanation states, *"Two soil samples collected from vicinity of site (S04 and B-9) indicate the presence of VOCs, SVOCs, and pesticides/PCBs."* Figure 3 of the STEP report does indicate sample S04 was located in this area, but no data is presented for any sample identified as being in the vicinity of the Rodney Hunt Still Building. Reference to this sample should be deleted.
8. Figure 2-1: The indicated location for boring GP-1 is on the hydraulically up gradient, eastern edge of the area identified as Former Tanker Staging Area 1. It is recommend that this geoprobe boring location be moved to the west to place it in the western half of the area of concern.
9. Figure 2-1 (also corresponds to Work Plan Figure 4-1): As noted in the Work Plan comments, groundwater reportedly flows west under the site towards the East Branch of the Black River (E&E, 1982). No down gradient groundwater samples are indicated for potential source areas identified as former drum storage areas 1, 4 and 5, the former above-ground storage area, or former tanker staging area 2. Additional monitoring locations should be placed in these area and rationale provided for the groundwater monitoring.
10. Section 3.1, Section 3.2, and Appendix A SOP 1: The AOC (Section VIII Work to Be Performed, Item 66) *"Respondents will not proceed further with any subsequent activities or tasks until receiving U.S. EPA approval for the following deliverables: RI/FS work plan and sampling and analysis plan..."* Mobilization and demobilization activities should also include a specified notice period to U.S. EPA.
11. Section 3.4.1, page 8 of 15, second paragraph: A sufficient number of geotechnical samples should be collected to adequately characterize the site. Four samples from two lithologic units will likely not accomplish this task. Please revise this section and provide rationale for the new geotechnical sample locations.
12. Section 3.4.1, page 8 of 15, third paragraph: A standard soil and rock classification system should be used to maintain consistency throughout the project. Field personnel should use the Unified Soil Classification System in association with Munsell® rock and soil color charts.



13. Section 3.4.3, page 9 of 15: The existing monitoring wells onsite and offsite should be redeveloped prior to analytical sampling of the groundwater to ensure that the wells are free of sediment.
14. Section 4.1.1, page 10 of 15: Appendix A, SOP 4 does not reference “relevant Ohio guidance” Please see additional comments below on SOP 4.
15. Section 4.1.4, pages 11 and 12 of 15: Sediment samples should be collected with the farthest downstream sample first, working back up to the farthest upstream sample to eliminate the possibility of suspended sediments upstream impacting the downstream samples.
16. Section 4.2, first sentence, page 11 of 15: The QAPP should be referenced for the sample handling procedures.
17. Section 4.3, page 11 of 15: This general section needs to be in agreement with the revised QAPP.
18. Section 4.4, page 12 of 15: Appendix B is referenced in this section, which in turn states that a photoionization detector (PID) will be used to screen for volatile organic compounds. Appendix A, SOP 12 states that a PID with an 11.7ev lamp will be used for field screening of the soil samples. The 11.7 ev lamp tend to be less durable under normal field conditions than 10.6 ev lamps. They have a shorter work life and generally experience more “drift” induced by moisture and dust. Additional calibration checks are required to ensure that the meter is functioning properly. Flame ionization detectors (FIDs) are preferable due to the fewer number of response and maintenance issues. Please provide justification for not using FIDs. If PIDs will still be used, regular calibration checks should be added to the SOP for the 11.7 ev lamps.
19. Section 4.8, pages 13 and 14 of 15, general comment: Decontamination of equipment and personnel should be governed by the procedures outlined in the FSP, HASP and QAPP. Thus, decontamination intervals are expected to be more numerous than just at project closeout. Investigation-derived waste shall be managed as required by Federal, state and local regulation. These regulations may require the removal of investigation-derived waste from the site prior to project closeout.
20. Section 4.8.4, page 14 of 15: SOP 16 does not exist in Appendix A. SOP 15 does address the handling of IDW. Please revise the text.

#### **Appendix A – Standard Operating Procedures**

1. SOP 1, page 2 of 21: Prior to initiating field activities, notice of EPA’s acceptance of the work plan documents is required. The Respondent’s contractor shall provide advance notice to EPA of the fieldwork schedule.

2. SOP 3, page 4 of 21: Based on the rationale tables provided at the end of Section 2, VOCs, SVOCs, PCBs, and metals will constitute most of the analysis and therefore, will impact the sampling equipment. An alternate decontamination methodology that addresses these contaminants should be provided.
3. SOP 4, page 5 of 21: The first bullet under Drilling and Geologic Logging Method states that soil borings will be drilled either with 6.25-I.D. hollow stem augers or a hand auger. Contrary to the FSP text, there is no discussion of using a Geoprobe® nor is there a methodology for collecting and handling Geoprobe® samples. Please provide a detailed SOP for use of the Geoprobe® at the site and clarify the use of a hollow stem auger rig at the site.
4. SOP 4, page 5 of 21: The 7<sup>th</sup> bullet under Drilling and Geologic Logging Method discusses the collection of soil sample in accordance with SW846 Method 8260, however, in January of 1998, EPA finalized Method 5035 as part of the Third Edition revisions to SW-846, *Methods for the Testing and Analysis of Hazardous Wastes*. Method 5035 requires soil samples to be analyzed for VOCs to be preserved in the field with either methanol (High Level Method) or an aqueous solution of sodium bisulfate (Low Level Method). Alternatively, soil samples for VOC analysis can be collected using an EnCore™ or SoilCore™ sampler. Please provide the methodology for collection of soil samples for VOC analysis throughout the SOP.
5. SOP 4, page 6 of 21: The 3<sup>rd</sup> bullet references Appendix C for the forms, however, Appendix C is for the field instrument calibration and operation. Please correct the reference.
6. SOP 4, page 6 of 21: The 6<sup>th</sup> bullet has an incorrect reference for the well construction SOP. It should refer to SOP 5 in Appendix A.
7. SOP 5, page 7 of 21, Item 2 under Shallow Monitoring Wells: The number of feet needs to be stated under the first and second bullets of this section. Additionally, the slot size of the PVC well screen should be stated.
8. SOP 5, pages 7 and 8 of 21: The sand used for the monitoring well filter pack should be clean, washed silica sand suitable for monitoring well installation. Also, the final depth of the borehole, top of the sand pack, top of bentonite seal, and top of grout should be confirmed with a clean, weighted tape measure prior to adding each successive layer. Please add this detail to the SOP.
9. SOP 6, page 9 of 21: Does the 24 hours after installation begin at the installation of the bentonite seal, grout, or the entire completion of the monitoring well? Please explain the time for development and state the minimum amount of water to be developed from each monitoring well.
10. SOP 7, page 10 of 21: Please state that chain of custody procedures will be followed as stated in Section 9 of the approved Quality Assurance Project Plan.

11. SOPs 8 through 12: Each SOP needs to be in compliance with the USEPA approved QAPP for the project. Please provide information on how this will be done.
12. SOP 12, page 17 of 21: see comment 18 under the *Specific Comments* section.
13. SOP 13, pages 18 and 19 of 21: Both the sampling of surface water and sediments should start in the most downstream position and work up to the farthest upstream position. Please add this to the SOP so that the sampling methods are in compliance with the USEPA approved QAPP.
14. SOP 15, page 21 of 21: Investigation-derived waste shall be managed as required by Federal, state and local regulations and the SOW (USEPA 2002).
15. SOP 15, page 21 of 21: The composite sample(s) for the investigation-derived soils should be sampled for all of the constituents being addressed by the investigation. Low concentrations or nondetections of volatile organic compounds alone cannot justify spreading the drill cuttings on the ground. Please revise the rationale and handling methods for investigation-derived wastes at the site.

#### **Appendix B – Field Measurements**

The calibration procedures for the photoionization detector, interface probe and water level indicator are not provided in Appendix C as stated. Please revise.

#### **Appendix D – Forms and Checklists**

A daily sign in sheet, located at the main field office, is recommended to keep track of personnel entering and leaving the site. Suggested fields are: *DATE, TIME IN, TIME OUT, NAME, COMPANY NAME*.